S/N 09/924,742 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Bret Walczynski	Examiner:	Yvette C. Thornton
Serial No.:	09/924,742	Group Art Unit:	1752
Filed:	August 8, 2001	Docket No.:	2970.92USU1
Title:	PHOTORESIST ADHESIVE AND METHOD		

CERTIFICATE UNDER 37 CFR 1.6:
I hereby certify that this correspondence is being transmitted via facsimile to the U.S. Patent and Trademark Office on April 18, 2005.

By: _____
Name: Daniel Pauly

RESPONSE

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action mailed April 16, 2004 and the Notice of Appeal dated October 18, 2004, please consider the following remarks with respect to the above-identified application as follows:

REMARKS

Claims 7-9 and 11-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over VanIseghem (U.S. Patent No. 4,764,449) in further view of Etter (U.S. Patent No. 4,115,125) and Lin (U.S. Patent No. 5,100,963). Applicant believes these rejections are misplaced, and notes that the claimed invention is directed to a method of laminating a photoresist sheet to a substrate. In a first embodiment, the method includes providing a photoresist sheet; providing a preformed adhesive sheet; providing a substrate (such as glass to be etched); applying the adhesive sheet to the substrate; and applying the photoresist sheet to the substrate to form a composite structure containing the photoresist sheet, adhesive sheet, and substrate.

In a second aspect, the invention is directed to a method of laminating a photoresist sheet to a substrate. The method includes providing a photoresist sheet; providing a preformed adhesive sheet; providing a substrate; applying the adhesive sheet to the photoresist sheet; and applying the photoresist sheet to the substrate to form a composite structure containing the photoresist sheet, adhesive sheet, and substrate. Use of the preformed adhesive sheet is advantageous because it allows the photoresist sheet or mask to be applied quickly and without mess. In addition, the thickness of the adhesive sheet can be controlled so as to prevent formation of excessively thick areas or areas of irregular thickness that inhibit uniform abrasive blasting.

The Examiner has asserted that VanIseghem teaches a sandblast photoresist laminate article in which the adhesive layer can be coated on the opposite side of the membrane layer, and that such steps can be done simultaneously or in tandem. However, nothing in VanIseghem teaches the claimed invention, which requires that the adhesive be provided in a sheet form, and then applied to the rest of the laminate. Thus, the teachings of VanIseghem fail to teach the claimed invention, and nothing in Etter or Lin combine to make obvious the claimed invention. For example, Etter is not directed to a photoresist sheet, but merely to photographic elements such as in the phototypesetting industry. Etter uses an adhesive to adhere photographic elements to a paper support, in contrast to the present invention where the adhesive secures the photoresist sheet to a substrate, and is subsequently exposed to surface abrasion. Generally, the adhesive should provide sufficient strength between the photoresist mask layer and the substrate's target surface to prevent the abrasive decorating process from blasting away portions of the photoresist mask. In addition, when the photoresist mask is a laminate comprising a plurality of layers, some of which are removed after adhering of the laminate to the target surface, the adhesion between the photoresist mask layer and the target surface provided by the adhesive should be greater than the adhesion between any release liner and layer of the photoresist laminate which is in contact with the photoresist mask layer. This may be called the "transferability" of the photoresist mask. Nothing in Etter discloses any of these aspects of photoresist masks or the properties of materials used to adhere them to a substrate.

Claims 1, 5-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schupp et al. (U.S. Patent No. 4,596,759) further in view of Ugolick et al. (U.S. Patent No. 5,993,961). Similarly, Schupp et al. fails to teach a method of laminating a photoresist sheet to a

substrate, the method comprising providing a photoresist sheet; providing an adhesive sheet; providing a substrate; applying a water soluble adhesive sheet to the substrate; applying the photoresist sheet to the adhesive sheet on the substrate after the adhesive sheet has been applied to the substrate to form a composite structure containing the photoresist sheet, adhesive sheet, and substrate; wherein the adhesive is selected from the group consisting of adhesives containing poly (2-ethylhexyl acrylate); poly (n-butyl acrylate); poly (ethyl acrylate); poly (methyl acrylate), and combinations thereof. Nothing in Ugolick teaches the missing elements.

Finally, claims 7-9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Couture et al. (U.S. Patent No. 5,415,971) in further view of Etter (U.S. Patent No. 4,115,125) and Lin (U.S. Patent No. 5,100,963). Here, too, Courture et al. fails to teach the present invention, but instead is directed to a laminate in which the adhesive is formed with, and integral to, the rest of the laminate, unlike the present invention in which the adhesive sheet is separately provided.

In view of the above remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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Date: April 18, 2005

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